DERWENT-ACC-NO: 2000-251986

DERWENT-WEEK: 200064

TITLE: Anodic oxidation method of aluminum alloy die-cast parts such as safety valve flange, involves forming porous aluminum oxide film on surface of aluminum alloy which is then subjected to boehmite treatment

PATENT-ASSIGNEE: HITACHI LTD[HITA]

PRIORITY-DATA: 1998JP-0227836 (August 12, 1998)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 2000064092 A	February 29, 2000	N/A	005	C25D 011/16

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO	APPL-DATE
JP2000064092A	N/A	1998JP-0227836	August 12, 1998

INT-CL (IPC): C23C028/04, C25D011/04 , C25D011/16 , C25D011/18

ABSTRACTED-PUB-NO: JP2000064092A

BASIC-ABSTRACT:

NOVELTY - A porous oxide film (5) which has aluminum oxide, is formed on the surface of aluminum alloy which contains 7.5-18 wt.% of silicon. The surface layer formed with the porous oxide film is made fine than the inside layer which is then subjected to boehmite treatment.

USE - For wide variety of applications such as flange of motor housing base, blade of fan, washing machine dehydrator, main body of car stereo speaker, lever of trestle, main body of crime prevention camera, cover of heat sink, etc.

ADVANTAGE - Provides highly corrosion resistant anodic oxide film with a uniform black gray exterior surface without yellowish area for aluminum alloy especially die-cast.

DESCRIPTION OF DRAWING(S) - The figure explains processing of anodic oxidation method.

Oxide film 5

CHOSEN-DRAWING: Dwg.1/4

DERWENT-CLASS: M11

CPI-CODES: M11-E;

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2000-064092

(43)Date of publication of application : 29.02.2000

(51)Int.Cl. C25D 11/16
C23C 28/04
C25D 11/04
C25D 11/18

(21)Application number : 10-227836

(22)Date of filing : 12.08.1998

(71)Applicant : HITACHI LTD

(72)Inventor : UKO KENJI
OHASHI TAKEYA

(54) ALUMINUM-BASE ALLOY MEMBER, ITS ANODIC OXIDATION, AND USE OF THE ANODICALLY OXIDIXED MEMBER

(57)Abstract:

PROBLEM TO BE SOLVED: To prevent the occurrence of yellowing of oxide film by forming an oxide film composed essentially of aluminum oxide on the surface of a member made of aluminum-base alloy containing specific amounts of Si and constituting this oxide film of a porous inner layer and a surface layer denser than the inner layer.

SOLUTION: An oxide film composed essentially of aluminum oxide is formed on the surface of a member made of aluminum-base alloy containing 7.5-18 wt.% Si. This oxide layer consists of a porous inner layer and a surface layer denser than the inner layer, and the porosity of the outer layer and that of the inner layer are regulated to ≤30 vol.% and >30-50 vol.%, respectively. Further, the thickness of the outer layer and that of the inner layer are regulated to 0.06-0.3 μm and 3-70 μm, respectively, and the surface of the aluminum- base alloy member is subjected to boehmite treatment and then to anodic oxidation treatment in a solution containing sulfuric acid, oxalic acid, phosphoric acid, or the like. By this method, the oxide film capable of keeping dimensional accuracy and having uniform dark gray color can be formed.

LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of

rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]